

REMARKSDrawings

The Examiner stated that the required timing for the correction of drawings has changed, and that Applicants are required to submit drawing corrections within the time period set for responding to this Office Action. As requested by the Examiner, Applicants are concurrently filing formal figures that correct all objections made in the Notice of the Daftsperson's Patent Drawing Review, form PTO 948. Accordingly, Applicants have obviated this objection.

Rejection under 35 U.S.C. §103(a)

The Examiner has rejected Claims 1-18 under 35 U.S.C. § 103(a) as being unpatentable over Eisen *et al.*, (Reference AU4 of Form 1449 filed on July 14, 2000; hereinafter "Eisen"); in view of Mangiameli *et al.*, *Eupr J. Operational Res.* 93, 402-417 (1996) (hereinafter ("Mangiameli")); and Kohonen (Reference AR of Form 1449 filed on July 14, 2000; hereinafter "Kohonen"). The Examiner has stated that arguments presented in Amendment A, filed September 9, 2001 were not found persuasive because:

while Eisen et al. do not disclose SOM, they do recognize that the statistical method they used might not be the best and motivate experimenting with alternative or better method by stating that 'we recognize that the particular clustering algorithm we used is not the only, or even best, method available' and that 'we have used and are actively exploring alternatives such as parametric ordering of genes and supervised clustering methods...'. Office Action, page 4.

While not agreeing with the Examiner regarding his view of Eisen, Applicants are submitting herewith a Declaration under 37 CFR 1.131 by the named inventors stating that the actual reduction to practice of the claimed invention occurred prior to December 1998, the effective date of publication of Eisen. Thus, Eisen is not an effective reference against the instant application because the claimed invention has a prior invention date.

The remaining references, Mangiameli and Kohonen, do not establish a *prima facie* case of obvious. Mangiameli compares a SOM neural network with hierarchical clustering methods, and determines that SOM clustering is better in the 252 data sets that they tested. Kohonen is a reference text describing SOM models. Mangiameli and Kohonen do not even mention the applicability of SOMs to gene expression data. These references cannot render the claimed

invention obvious when they do not mention the invention being claimed, namely, the use of SOM to cluster gene expression data. Clearly, these cited references do not suggest the claimed invention. During the interview on January 15, 2002, the Examiner agreed that the remaining references, Mangiameli and Kohonen, do not render the claimed invention obvious.

Applicants did not agree with and hence argued (in Amendment A) against the rejections made in the prior office action and set forth that the cited references were not properly combinable given the technical subject matter of the references. As such, no Declaration under Rule 131 was submitted at that time. Where the Office Action at hand discounts the arguments set forth in Amendment A, Applicants now submit a Declaration under Rule 131 swearing behind the primary reference of Eisen.

### CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned at (978) 341-0036.

Respectfully submitted,

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Dated: 1/28/02